ABSTRACT OF THE DISCLOSURE

Method for determining an axle geometry by recording and evaluating a topographical image of a face (6) of a wheel (1) fitted to an axle (2), and a sensor (10) for execution of the method. The method includes projecting light with a coding onto an area on the face (6) of the wheel (1) from a projecting direction; recording the light reflected from the area on the face (6) of the wheel (1) with an image converter (8), from a direction other than the light projecting direction; determining three-dimensional surface coordinates for the topographical image of the face (6) of the wheel (1) from the recorded light; and evaluating the topographical image in relation to a reference system.